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09/446,888	12/30/1999	TOSHIYUKI FUTAKATA	6342-0039-2	3055
22850	7590	06/01/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			KUMAR, PANKAJ	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/446,888

Applicant(s)

FUTAKATA ET AL.

Examiner

Pankaj Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 7-9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/04, 12/99.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 12/13/2004 have been fully considered and they are moot in view of the new grounds of rejection.

### ***Response to Amendment***

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano USPN 6,011,787 in view of Higuchi USPN 6,167,037. Here is how the references teach the claims:
4. As per claim 1: assigning a code (Nakano 6011787 fig. 4: 35, 55 code generator) associated with each base station group including more than one base station or a code associated with each network type (Nakano 6011787 fig. 4: 35, 55 code generator is for a communication network) to which said base station group belongs (Nakano fig. 1: group of base stations 1 and 2 belong to one communication network) as said second spreading code (Nakano fig. 4: 37 is spreading based on the code from 35), wherein said second spreading code functions as an identifier of said base station group or said network type (not in Nakano but Higuchi teaches this and it would be obvious to combine as explained below) in said more than one base station (Nakano fig. 1: communication network has more than one base station) and in mobile stations

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belonging to said more than one base station (Nakano fig. 1: mobile station 92 belongs to both base stations 1 and 2).

5. Nakano does not teach associated with each base station group including more than one base station. The office takes official notice that since this recitation is being or-ed with associated with each network type and Nakano teaches associated with each network type, a reference does not need to teach the limitation before the “or” statement if the limitation after the “or” statement is taught. Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, that the teaching of Nakano teaches the claimed limitation after the “or” statement as recited by the instant claims and thus Nakano does not need to teach the limitation before the or statement in the analogous art of communication.

6. Nakano teaches one spreading with code but does not teach a second spreading code. Higuchi teaches a first spreading code and a second spreading code (Higuchi col. 4 lines 5-6). Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at the second spreading code as recited by the instant claims, because the combined teaching of Nakano with Higuchi suggest second spreading code as recited by the instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of Nakano with Higuchi because Nakano suggests spreading with code (something broad) in general and Higuchi suggests the beneficial use of a second spreading code such as one spreading code common to a group of base stations and a another spreading code being individual to base stations in the analogous art of communication.

7. Nakano does not teach spreading code functions as an identifier of said base station group or said network type. Higuchi teaches spreading code functions as an identifier of said base

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station group or said network type (Higuchi col. 4 lines 6-7: spreading code being common to respective base stations). Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at the spreading code functions as an identifier of said base station group or said network type as recited by the instant claims, because the combined teaching of Nakano with Higuchi suggest spreading code functions as an identifier of said base station group or said network type as recited by the instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of Nakano with Higuchi because Nakano suggests spreading with code for the base stations (something broad) in general and Higuchi suggests the beneficial use of the same spreading code being used for a group of base stations such as this code being shorter than a code for individual base stations (Higuchi col. 4 lines 5-11) and thus the amount of time needed to initially acquire the spreading code is decreased (Higuchi col. 2 lines 38-39) in the analogous art of communication.

8. The recitations in the preamble, except for the same recitations that are in the body of the claim such as "second spreading code", are not given patentable weight since the recitations occur in the preamble and recite the intended use of a structure and the body of claim does not depend on the preamble for completeness and the bodily limitations are able to stand alone. Thus, the bodily limitations do not require recitations in the preamble except for "second spreading code" as the bodily limitations can be comprised in a communication system described in Nakano in view of Higuchi.

9. As per claim 2: assigning a code (Nakano 6011787 fig. 4: 35, 55 code generator) associated with each base station group including more than one base station or a code associated

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with each network type (Nakano 6011787 fig. 4: 35, 55 code generator is for a communication network) to which said base station group belongs (Nakano fig. 1: group of base stations 1 and 2 belong to one communication network) as said second spreading code (Nakano fig. 4: 37 is spreading based on the code from 35); and transmitting (Nakano fig. 4: transmission) a signal which is spread (Nakano fig. 4: 37) with said second spreading code (Nakano fig. 4: output of 35) between one of said more than one base station (Nakano fig. 1: multiple base stations) and a mobile station (Nakano fig. 1: mobile station 92) (Nakano fig. 1: communication signals between mobile and base stations and thus signals are transmitted between mobile and base stations), wherein said second spreading code functions as an identifier of said base station group or said network type (not in Nakano but Higuchi teaches this and it would be obvious to combine as explained below) in said more than one base station (Nakano fig. 1: communication network has more than one base station) and said mobile station

10. Nakano does not teach associated with each base station group including more than one base station. The office takes official notice that since this recitation is being or-ed with associated with each network type and Nakano teaches associated with each network type, a reference does not need to teach the limitation before the “or” statement if the limitation after the “or” statement is taught. Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, that the teaching of Nakano teaches the claimed limitation after the “or” statement as recited by the instant claims and thus Nakano does not need to teach the limitation before the or statement in the analogous art of communication.

11. Nakano teaches one spreading with code but does not teach a second spreading code. Higuchi teaches a first spreading code and a second spreading code (Higuchi col. 4 lines 5-6).

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Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at the second spreading code as recited by the instant claims, because the combined teaching of Nakano with Higuchi suggest second spreading code as recited by the instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of Nakano with Higuchi because Nakano suggests spreading with code (something broad) in general and Higuchi suggests the beneficial use of a second spreading code such as one spreading code common to a group of base stations and a another spreading code being individual to base stations in the analogous art of communication.

12. Nakano does not teach spreading code functions as an identifier of said base station group or said network type. Higuchi teaches spreading code functions as an identifier of said base station group or said network type (Higuchi col. 4 lines 6-7: spreading code being common to respective base stations). Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at the spreading code functions as an identifier of said base station group or said network type as recited by the instant claims, because the combined teaching of Nakano with Higuchi suggest spreading code functions as an identifier of said base station group or said network type as recited by the instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of Nakano with Higuchi because Nakano suggests spreading with code for the base stations (something broad) in general and Higuichi suggests the beneficial use of the same spreading code being used for a group of base stations such as this code being shorter than a code for individual base stations (Higuchi col. 4 lines 5-11) and thus the amount of time needed to initially acquire the spreading code is decreased (Higuchi col. 2 lines 38-39) in the analogous art of communication.

13. The recitations in the preamble, except for the same recitations that are in the body of the claim such as “second spreading code”, are not given patentable weight since the recitations occur in the preamble and recite the intended use of a structure and the body of claim does not depend on the preamble for completeness and the bodily limitations are able to stand alone. Thus, the bodily limitations do not require recitations in the preamble except for “second spreading code” as the bodily limitations can be comprised in a communication system described in Nakano in view of Higuchi.

14. As per claim 3: a base station using (Nakano fig. 1: one of the base stations) said second spreading code assigned to each base station group including more than one base station or said second spreading code assigned to each network type (Nakano 6011787 fig. 4: 35, 55 code generator is for a communication network) to which said base station group belongs (Nakano fig. 1: group of base stations 1 and 2 belong to one communication network), said base station group including more than one of said base station (Nakano fig. 1: base stations 1 and 2 are both part of the same communication network); and a mobile station (Nakano fig. 1: mobile station) communicating with said base station (Nakano fig. 1: base station) by using a signal which is spread by said second spreading code assigned to said base station (Nakano col. 4 lines 46-47: fig. 4 is part of the base station; since the spreader and code generator in fig. 4 are inside the base station, they are assigned to the base station), wherein said second spreading code functions as an identifier of said base station group or said network type (not in Nakano but Higuchi teaches this and it would be obvious to combine as explained below) in said more than one base station (Nakano fig. 1: communication network has more than one base station) and said mobile station.



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15. Nakano does not teach associated with each base station group including more than one base station. The office takes official notice that since this recitation is being or-ed with associated with each network type and Nakano teaches associated with each network type, a reference does not need to teach the limitation before the “or” statement if the limitation after the “or” statement is taught. Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, that the teaching of Nakano teaches the claimed limitation after the “or” statement as recited by the instant claims and thus Nakano does not need to teach the limitation before the or statement in the analogous art of communication.

16. Nakano teaches one spreading with code but does not teach a second spreading code. Higuchi teaches a first spreading code and a second spreading code (Higuchi col. 4 lines 5-6). Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at the second spreading code as recited by the instant claims, because the combined teaching of Nakano with Higuchi suggest second spreading code as recited by the instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of Nakano with Higuchi because Nakano suggests spreading with code (something broad) in general and Higuchi suggests the beneficial use of a second spreading code such as one spreading code common to a group of base stations and a another spreading code being individual to base stations in the analogous art of communication.

17. Nakano does not teach spreading code functions as an identifier of said base station group or said network type. Higuchi teaches spreading code functions as an identifier of said base station group or said network type (Higuchi col. 4 lines 6-7: spreading code being common to respective base stations). Thus, it would have been obvious, to one of ordinary skill in the art, at

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time the invention was made, to arrive at the spreading code functions as an identifier of said base station group or said network type as recited by the instant claims, because the combined teaching of Nakano with Higuchi suggest spreading code functions as an identifier of said base station group or said network type as recited by the instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of Nakano with Higuchi because Nakano suggests spreading with code for the base stations (something broad) in general and Higuchi suggests the beneficial use of the same spreading code being used for a group of base stations such as this code being shorter than a code for individual base stations (Higuchi col. 4 lines 5-11) and thus the amount of time needed to initially acquire the spreading code is decreased (Higuchi col. 2 lines 38-39) in the analogous art of communication.

18. The recitations in the preamble, except for the same recitations that are in the body of the claim such as “second spreading code”, are not given patentable weight since the recitations occur in the preamble and recite the intended use of a structure and the body of claim does not depend on the preamble for completeness and the bodily limitations are able to stand alone. Thus, the bodily limitations do not require recitations in the preamble except for “second spreading code” as the bodily limitations can be comprised in a communication system described in Nakano in view of Higuchi.

19. As per claim 4: said transmitter (Nakano fig. 4: transmission) assigning a code (Nakano 6011787 fig. 4: 35, 55 code generator) associated with each base station group including more than one base station or a code associated with each network type (Nakano 6011787 fig. 4: 35, 55 code generator is for a communication network) to which said base station group belongs (Nakano fig. 1: group of base stations 1 and 2 belong to one communication network) as said

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second spreading code (Nakano fig. 4: 37 is spreading based on the code from 35); and said transmitter (Nakano fig. 4: transmission) carrying out communication using a signal spread by said second spreading code (Nakano fig. 4 transmission of the signal spread in 37) assigned to one of said more than one base station (Nakano col. 4 lines 46-47: fig. 4 is part of the base station; since the spreader and code generator in fig. 4 are inside the base station, they are assigned to the base station), wherein said second spreading code functions as an identifier of said base station group or said network type (not in Nakano but Higuchi teaches this and it would be obvious to combine as explained below) in said base station (Nakano fig. 1: base station) and said mobile station (Nakano fig. 1: mobile station).

20. Nakano does not teach associated with each base station group including more than one base station. The office takes official notice that since this recitation is being or-ed with associated with each network type and Nakano teaches associated with each network type, a reference does not need to teach the limitation before the “or” statement if the limitation after the “or” statement is taught. Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, that the teaching of Nakano teaches the claimed limitation after the “or” statement as recited by the instant claims and thus Nakano does not need to teach the limitation before the or statement in the analogous art of communication.

21. Nakano teaches one spreading with code but does not teach a second spreading code. Higuchi teaches a first spreading code and a second spreading code (Higuchi col. 4 lines 5-6). Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at the second spreading code as recited by the instant claims, because the combined teaching of Nakano with Higuchi suggest second spreading code as recited by the

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instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of Nakano with Higuchi because Nakano suggests spreading with code (something broad) in general and Higuchi suggests the beneficial use of a second spreading code such as one spreading code common to a group of base stations and a another spreading code being individual to base stations in the analogous art of communication.

22. Nakano does not teach spreading code functions as an identifier of said base station group or said network type. Higuchi teaches spreading code functions as an identifier of said base station group or said network type (Higuchi col. 4 lines 6-7: spreading code being common to respective base stations). Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at the spreading code functions as an identifier of said base station group or said network type as recited by the instant claims, because the combined teaching of Nakano with Higuchi suggest spreading code functions as an identifier of said base station group or said network type as recited by the instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of Nakano with Higuchi because Nakano suggests spreading with code for the base stations (something broad) in general and Higuichi suggests the beneficial use of the same spreading code being used for a group of base stations such as this code being shorter than a code for individual base stations (Higuchi col. 4 lines 5-11) and thus the amount of time needed to initially acquire the spreading code is decreased (Higuchi col. 2 lines 38-39) in the analogous art of communication.

23. The recitations in the preamble, except for the same recitations that are in the body of the claim such as "second spreading code" and "said transmitter", are not given patentable weight since the recitations occur in the preamble and recite the intended use of a structure and the body

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of claim does not depend on the preamble for completeness and the bodily limitations are able to stand alone. Thus, the bodily limitations do not require recitations in the preamble except for “second spreading code” as the bodily limitations can be comprised in a communication system described in Nakano in view of Higuchi.

24. As per claim 5: said receiver (Nakano fig. 4: reception) assigning a code (Nakano 6011787 fig. 4: 35, 55 code generator) associated with each base station group including more than one base station or a code associated with each network type (Nakano 6011787 fig. 4: 35, 55 code generator is for a communication network) to which said base station group belongs (Nakano fig. 1: group of base stations 1 and 2 belong to one communication network) as said second spreading code (Nakano fig. 4: 37 is spreading based on the code from 35); and said receiver (Nakano fig. 4: reception) carrying out communication using a signal spread by said second spreading code (Nakano fig. 4: reception of the signal using the code in 55) assigned to one of said more than one base station (Nakano col. 4 lines 46-47: fig. 4 is part of the base station; since the code generator in fig. 4 is inside the base station, it is assigned to the base station), wherein said second spreading code functions as an identifier of said base station group or said network type (not in Nakano but Higuchi teaches this and it would be obvious to combine as explained below) in said receiver (Nakano fig. 1: mobile receives signal from base; transmission and reception between the various components including the mobile, base, and communication network).

25. Nakano does not teach associated with each base station group including more than one base station. The office takes official notice that since this recitation is being or-ed with

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associated with each network type and Nakano teaches associated with each network type, a reference does not need to teach the limitation before the “or” statement if the limitation after the “or” statement is taught. Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, that the teaching of Nakano teaches the claimed limitation after the “or” statement as recited by the instant claims and thus Nakano does not need to teach the limitation before the or statement in the analogous art of communication.

26. Nakano teaches one spreading with code but does not teach a second spreading code. Higuchi teaches a first spreading code and a second spreading code (Higuchi col. 4 lines 5-6). Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at the second spreading code as recited by the instant claims, because the combined teaching of Nakano with Higuchi suggest second spreading code as recited by the instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of Nakano with Higuchi because Nakano suggests spreading with code (something broad) in general and Higuchi suggests the beneficial use of a second spreading code such as one spreading code common to a group of base stations and a another spreading code being individual to base stations in the analogous art of communication.

27. Nakano does not teach spreading code functions as an identifier of said base station group or said network type. Higuchi teaches spreading code functions as an identifier of said base station group or said network type (Higuchi col. 4 lines 6-7: spreading code being common to respective base stations). Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at the spreading code functions as an identifier of said base station group or said network type as recited by the instant claims, because the combined

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teaching of Nakano with Higuchi suggest spreading code functions as an identifier of said base station group or said network type as recited by the instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of Nakano with Higuchi because Nakano suggests spreading with code for the base stations (something broad) in general and Higuchi suggests the beneficial use of the same spreading code being used for a group of base stations such as this code being shorter than a code for individual base stations (Higuchi col. 4 lines 5-11) and thus the amount of time needed to initially acquire the spreading code is decreased (Higuchi col. 2 lines 38-39) in the analogous art of communication.

28. The recitations in the preamble, except for the same recitations that are in the body of the claim such as “second spreading code” and “said receiver”, are not given patentable weight since the recitations occur in the preamble and recite the intended use of a structure and the body of claim does not depend on the preamble for completeness and the bodily limitations are able to stand alone. Thus, the bodily limitations do not require recitations in the preamble except for “second spreading code” as the bodily limitations can be comprised in a communication system described in Nakano in view of Higuchi.

29. As per claim 6: said transceiver (Nakano fig. 4: transmission and reception) assigning a code (Nakano 6011787 fig. 4: 35, 55 code generator) associated with each base station group including more than one base station or a code associated with each network type (Nakano 6011787 fig. 4: 35, 55 code generator is for a communication network) to which said base station group belongs (Nakano fig. 1: group of base stations 1 and 2 belong to one communication network) as said second spreading code (Nakano fig. 4: 37 is spreading based on the code from 35); and said transceiver (Nakano fig. 4: transmission and reception) carrying out

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communication using a signal spread by said second spreading code (Nakano fig. 4: transmission of the signal using the code in 35, reception of the signal using the code in 55) assigned to one of said more than one base station (Nakano col. 4 lines 46-47: fig. 4 is part of the base station; since the code generator in fig. 4 is inside the base station, it is assigned to the base station), wherein said second spreading code functions as an identifier of said base station group or said network type (not in Nakano but Higuchi teaches this and it would be obvious to combine as explained below) in said transceiver (Nakano fig. 1: mobile receives signal from base; transmission and reception between the various components including the mobile, base, and communication network).

***Allowable Subject Matter***

30. Claims 7-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

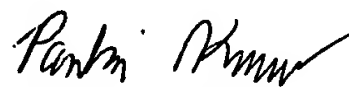


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pankaj Kumar whose telephone number is (571) 272-3011. The examiner can normally be reached on Mon, Tues, Thurs and Fri after 8AM to after 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Pankaj Kumar  
Patent Examiner  
Art Unit 2631

PK